TRANSACTIONS

OF THE

NEW YORK SURGICAL SOCIETY.

Stated Meeting, November 11, 1908.

The President, Dr. Joseph A. Blake, in the Chair.

ACUTE HEMORRHAGIC PANCREATITIS.

Dr. John F. Erdmann presented a woman, 22 years old, who, when she was first seen by Dr. Erdmann, on August 13, 1907, gave the following history: On June 13 she had a pain in her abdomen, and for some time previous to that date she had suffered from "spoiled stomach." The pain in the abdomen was typical of gall-stones, the pain continuing for a few days, and was accompanied by vomiting. Between June 13 and August 13, 1907, she had a number of similar attacks, and in one of them she became markedly jaundiced. On the 12th of August she had a sharp abdominal pain, intense and back-splitting, which immense doses of morphine failed to relieve.

When the patient was brought to the sanitarium, she presented more or less evidence of shock, with rise of temperature and rapid pulse, and intense pain in the epigastric region; this extended laterally into the back and also to the area of the gall-bladder. A probable diagnosis of acute hemorrhagic pancreatitis was made. A suggestion to open the abdomen that night was refused, but the following morning the conditions were so much worse that the members of the family themselves saw the change, and consented to an operation.

Upon opening the abdomen there was a free gush of beef-broth-like fluid, and some evidences of fat necrosis. The pancreas was rapidly exposed and found to be profoundly hemorrhagic. The œdematous infiltrate extended retroperitoneally toward the hepatic flexure and the ascending colon. Palpation

of the gall-bladder showed that it was filled with numerous small stones, 70 in all being removed by cholecystotomy. The peritoneum over the pancreas was punctured in several places, and a cigarette drain was inserted to its site. The patient reacted well from the operation, and for several days there was free drainage of a musty, mucilaginous material. The edges of the wound showed fat necrosis in the panniculus adiposus. The patient was placed in a semi-sitting posture in about two days and left the hospital at the end of the fourth week, the wound then being practically closed. Now, at the end of fifteen months, the patient is entirely well, with the exception of slight digestive disturbances. She had gained in weight.

Examination of the urine at the time of the operation proved negative as to sugar. No Cammidge test was made on account of the emergency.

GASTRO-ENTEROSTOMY (ROUX) FOR CONTINUED VOMITING.

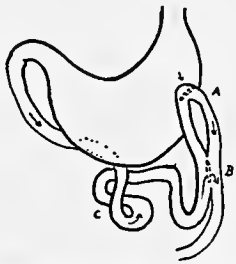
Dr. Charles A. Elsberg presented a woman, 23 years old, who was first operated on in Berlin three years ago by Prof. Israel for acute appendicitis. About a year later, on account of symptoms of gastric ulcer, with vomiting of blood, she was operated upon by Krause of Berlin, who did a gastro-enterostomy. After this operation she developed signs of vicious circle; she was again operated upon, and an anastomosis was made between the ascending and descending loops of the jejunum. After this last operation the vomiting ceased.

The patient was admitted to the medical service of the Mt. Sinai Hospital in July, 1908, with the history of having suffered from vomiting and diarrhœa for the past three weeks. She was put upon rectal alimentation and careful treatment, but in spite of all that could be done the vomiting persisted and she emaciated rapidly. A number of times during the day and night she would expel from the stomach large quantities of green fluid, sometimes streaked with blood.

Dr. Elsberg was asked to see the patient in consultation with Dr. Libman, and agreed with him that an exploratory operation was urgently indicated. On July 31 he opened the abdomen through an incision to the left of the old scar, and found the stomach and intestines bound together by abundant adhesions.

It was almost impossible to trace the course of the intestines until a large number of adhesions had been divided. Finally, he was able to follow the course of the duodenum and jejunum, and to understand, as he thought, the condition of affairs. From the duodenojejunal junction the bowel passed downwards, then upwards and to the right, underneath the first portion of the jejunum; then back again to the left side and then upwards to the anterior wall of the stomach, where the anastomosis had been made. There was also a broad anastomosis between the afferent and efferent loops of jejunum. Two fingers could be passed with ease through both of the stomata. The only point of note was that the anastomosis between the stomach and jeju-

FIG. 1.



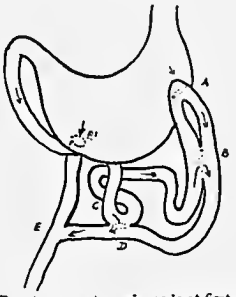
Condition found at first operation: *A*, gastro-enterostomy; *B*, entero-anastomosis; *C*, twist in jejunum.

num had been made very high up on the fundus. The jejunum that formed a loop underneath the first part of the jejunum was compressed and could not be freed. Evidently, an anterior gastro-enterostomy with a large loop had been made, and this loop had become twisted upon itself in the manner described. The pylorus felt normal. Believing that the trouble lay in the twisted loop of jejunum, Dr. Elsberg made an anastomosis between the jejunum beyond the old gastro-enterostomy and the twisted loop of jejunum (see Fig. 2).

In spite of this operation, the vomiting continued, enormous quantities of bile being expelled from the stomach at frequent intervals. The patient was carefully examined for evidences of some other disease to which the vomiting might be secondary,

and the possibility of a neurosis or hysteria was considered, but nothing could be found. Inasmuch as all parts of the jejunum were now well drained (see Fig. 2), the only possibility was that on account of the position of the anastomosis there was a valve formation at the stoma high up, near the cardia. The patient's condition became progressively worse, and another operation was decided upon. The abdomen was again opened through the old scar, and as the various anastomoses were found patent, Dr. Elsberg said he determined to do an entirely new gastro-enterostomy, and chose the method of Roux. A very large mass of adhesions had to be divided before the transverse mesocolon near the pyloric end of the stomach could be exposed.

FIG. 2.



After second operation: *D*, entero-anastomosis made at first operation; *E*, *E'*, gastro-enterostomy en Y made at second operation.

An opening was made into it, the jejunum divided (see Fig. 2), and an anastomosis was made between the jejunum and the posterior surface of the stomach near the pylorus, by suture. Before this was done, an end-to-side anastomosis was made between the proximal jejunum and the peripheral jejunum by means of a Murphy button. One part of the button was pushed down into the peripheral jejunum in the manner described some years ago by Dr. Robert F. Weir.

The patient stood the prolonged operation well, and for two days the vomiting was slight. Then, in spite of all treatment, she began to vomit again, and this continued for ten days, no matter whether food was taken into the stomach or not. At this time the button was passed, and within 24 hours

the vomiting ceased. The patient began to take food regularly, and she rapidly gained flesh and strength. The wound healed by primary union, excepting for a small drainage opening. Since the last operation she had gained about 30 pounds in weight; she felt perfectly well and had resumed her work as a nurse.

RESECTION OF INTESTINE PRESENTING UNUSUAL FEATURES.

DR. ELSBERG presented a boy, fourteen years old, who had been operated on in August, 1907, for acute appendicitis, with abscess and diffuse peritonitis. In January, 1908, he was re-admitted into Mt. Sinai Hospital with symptoms of acute intestinal obstruction of 36 hours' duration. At the operation, which was done at once, a loop of ileum was found gangrenous and constricted by a broad band. In spite of the presence of fecal vomiting, the patient's condition was so good that a radical resection was determined upon. Twelve inches of the ileum were removed and an end-to-end anastomosis made by suture. After twenty-four hours the fecal vomiting ceased, and thereafter the boy made a steady recovery for ten days. At that time, when only a sinus remained, he suddenly developed symptoms of acute obstruction, and within a few hours his general condition was very serious. Just prior to his removal to the operating room it was noted that there was a slight feculent discharge from the sinus.

The abdomen was again opened through the first scar, and a large loop of intestine, including the former anastomosis, was found constricted by a band, and its vessels thrombosed. Through the distention of the affected loop, the anastomosis had given way at one point. This time about three feet of intestine were removed, the peripheral end being near the ileocæcal junction. The patient's condition was so poor that all operative manipulations had to be rapidly done. The bowel was removed in the usual manner, the ileocæcal end closed by a double layer of sutures, a tube tied in the ileum, and the end of the bowel fixed in the wound, thus forming an iliac anus. Although the patient was in extremely poor condition at the end of the operation, he recovered after energetic stimulation. After a few days the tube came away, and it was impossible to control the discharge

of fæces from the bowel. The patient was continually bathed in fæces, and was in a deplorable condition.

Ten days later Dr. Elsberg opened the abdomen a third time, this time by an incision to the left of the median line, as far away as possible from the artificial anus. After some difficulty, the ileum which led down to the anus was found, and at a point about two feet from the artificial anus an ileocolostomy by lateral anastomosis was done, by suture. By this means he hoped to divert the fæces into the colon, but in spite of the fact that a large opening had been made and that the stoma was patent (as was proven by the injection of fluid into the rectum and its appearance at the artificial anus), most of the fæces still came out of the artificial anus. Every possible means to control this, by means of distended rubber bags in the bowel, by pressure, by keeping the boy in the Trendelenburg posture, etc., were tried, but without success. He was continually bathed in fæces, his skin was raw and very tender and he was rapidly emaciating.

At the fourth and last operation the speaker said he planned to close the bowel peripherally to the ileocolostomy, and then extirpate the intestine down to the artificial anus. On account of the many adhesions, this could not be done, so he united the ileum beyond the ileocolostomy again to the descending colon by lateral anastomosis, by suture, closed the gut just beyond the stoma, and extirpated the entire bowel distal to this point. The removal of the bowel, about eighteen inches long, was rendered very difficult through many old adhesions. It was accomplished by the following method: The mesentery was first tied and cut off, the end of the bowel grasped by a clamp, inverted into itself, and made to emerge through the artificial anus on the right side. It was excised from there as soon as the left abdominal incision had been closed. The patient made a good recovery from this operation; he rapidly gained flesh and strength, and was discharged, cured, one month after the operation.

EXCISION OF THE GREATER PART OF THE COLON.

Dr. John F. Erdmann presented a man, 33 years old, who gave a history of having suffered for about two years with attacks of indigestion and cramp-like pains, and that he had lost from 35 to 40 pounds in weight. When Dr. Erdmann first

saw him, on November 16, 1907, he gave no record of having lost flesh, and only a brief history of spasmodic pains in the abdomen, simulating a gall-bladder or mild appendix attack. His temperature at this time was 100°; pulse about 80, and there was no point pressure anywhere in the abdomen excepting over the appendix. There was no history of any associated trouble in the abdominal cavity, which pointed to the conditions found at the subsequent operation. He had been under the care of some of the best internists, and a diagnosis of gall-bladder and appendix invasion had frequently been made.

Operation.—Through a Kammerer incision the appendix was exposed and removed. It was seven inches long, about half an inch in diameter, its lumen was widely distended and its coats were thin, and it was adherent in the pelvis. No evidence of intestinal obstruction or disturbance was found at this time. The patient was relieved from all abdominal symptoms for a period of three days, and stated that he felt better than he had for months. Movements of the bowels were obtained until the fifth day, when he began to be restless and showed marked evidences of abdominal cramps, the centre of the disturbance being near the splenic region. It was evident at this time that some gross lesion, obstructive in nature, was present, and it was suspected of being in the large intestine. The patient was observed for another twelve hours. He then began to vomit fecal material, and was immediately submitted to operation for intestinal obstruction. The stomach was washed out and then the abdomen was rapidly opened. The site of the obstruction was found to be at the splenic flexure, and consisted of an annular growth about an inch in length, and completely surrounding the colon. Owing to the distention of the small intestine, an enterotomy was done; the intestines were stripped and washed with salt solution. The opening was then sutured and the sigmoid attached to the cæcum by means of a Murphy button. After the completion of the sigmoidocæcostomy, the patient's condition was such that it was deemed inadvisable to remove the growth, and this was deferred to a later day. The patient was put to bed in a condition of collapse. The button was passed on the eighth day, and the patient left the institution in the third week, refusing to have the excision of the growth done until he had recuperated by going away for a short time.

He finally consented to have the tumor removed on February 29, 1908, a little over three months after the second operation. At this time, the growth was exposed without difficulty: it had increased to almost twice its former size, and a few glands were evident in the mesocolon. The colon, owing to the invasion of the glands, was excised from the ascending to the beginning of the descending colon, the free ends being simply turned in and left as blind pouches. The patient made a speedy recovery, and had since gained thirty pounds in weight. He had previously gained twenty pounds between the second and third operations. Up to the present time there were no evidences of a recurrence. Pathologically, the growth was reported as being a colloid carcinoma.

PROSTATECTOMY.

Dr. John F. Erdmann presented a man, 41 years old, who was referred to Dr. Erdmann by Dr. John F. Moore in April, 1908. There was no history of gonorrhœa, syphilis or any genito-urinary trouble. Three years before, or at the age of 38, he had suffered with difficulty in voiding urine, having to get up three or four times during the night, and voiding small amounts every fifteen to sixty minutes during the day. There had been slight evidence of blood in the urine for the past year. An analysis of the urine showed some albumin and considerable pus and decomposed material.

Examination showed a bladder distended almost to the umbilicus. The patient complained of considerable pain, with inability to void urine, and suffering from a dribble overflow. The catheter withdrew sixty ounces of urine. He stated that he had been catheterized once in forty-eight hours for the past two weeks, drawing off a large quantity of urine each time. A No. 20 F. catheter passed easily, and no evidences of prostatic enlargement were made out.

When the patient returned for examination the following day he was again catheterized, withdrawing thirty-five ounces of urine. Attempts at cystoscopy failed, due to ultra-sensitiveness and cloudy urine. He was then admitted to the Private Hospital Association, and for a week was kept under observation with careful catheterization, irrigation, etc., and at the end of that time it was decided to do an exploratory operation in case

cystoscopy under anæsthesia revealed the causes of the obstruction. Upon one occasion, 100 ounces of urine were withdrawn at a single catheterization.

On April 18, 1908, an attempt at cystoscopy failed on account of the current being out of order. It was deemed advisable, as the patient had given his consent, to do a cystotomy and make a direct examination. This revealed a small nodule, ball-valve in character, about the size of a marrow-fat pea, springing from the upper margin of the inner meatus. The prostate, by internal palpation, was of about normal size. Further examination of the bladder showed the ureteral orifices sufficiently dilated to admit the tip of the little finger. The prostate, together with the so-called enlargement, which acted as a ball-valve, was removed. The patient, who had previously been in a very poor state of health, reacted promptly from the operation, and since then his weight had increased from 128 to 159 pounds, his usual weight being about 170 pounds. From the time of the operation up to the present time he has been able to void his urine spontaneously, with a varying amount of residual, between two and six ounces. He was now able to pass a stream with perfect ease. The urine at present was clear, and presented absolutely no evidence of decomposition. No tubercle bacilli nor coli commune were found in the urine during his stay in the sanitarium. Since then he had been seen about once a month, the catheter introduced and the residual withdrawn, no effort being made at irrigation. No cystoscopic examination had been made, the residual urine being attributed in all probability to atony. At the present time, dilatation of the urethra and internal meatus was being done once a week.

HYDRONEPHROSIS FROM ABNORMAL URETERAL IMPLANTATION.

Dr. John P. Erdmann presented a man, 28 years old, who was admitted to the hospital on July 1, 1908. The history he gave was that he had been irregular in his habits as regards eating and sleeping, and that he had used alcoholics moderately. He had no recollection of having had any of the diseases of childhood, nor any venereal disease. His first illness, about three years ago, began with dull pain in the left lumbar region; this

would last for two or three days and then disappear for several months, only to recur. Recently, the intervals between these attacks of pain had been shorter.

His present illness began about ten days ago, with pain in the left lumbar region, which became so severe and sharp that he could not sleep nor lie still in bed, nor could he walk about. This pain had persisted for several days.

Upon examination, the abdomen was not quite symmetrical. There was moderate bulging of the left side, between the crest of the ilium and the first rib. There was tenderness, moderate rigidity and flatness over this tumor, which seemed to be over the left kidney or the kidney pelvis site. There was dulness, swelling and tenderness over the left lumbar region, extending around to the spine. The patient complained of constant and great pain over this tumor. The extremities were normal. An X-ray, taken by Dr. Caldwell, was negative of kidney calculus. The urine was also negative.

Operation, July 3, 1908.—An incision, six inches long, was made parallel with the crest of the ilium and two inches above it, beginning at the tip of the twelfth rib posteriorly. The kidney was easily exposed and brought into the wound. The following conditions were found: (1) A small, hydronephrotic sac at the lower pole of the kidney. (2) A very small, narrow ureter issuing from the lower part of this sac, and kinked upon itself when the kidney was in its abnormally usual position of nephroptom. (3) The kidney was much smaller than usual, and was prolapsed.

An incision into the ureter showed that its lumen was patent, but very narrow. A grooved director, passed through the cortex, revealed no stones. The kidney was packed up higher in the lumbar region by means of gauze about the lower pole, to replace it normally, thus relieving the ureteral kink. The small incision into the ureter was left unsutured, a gauze drain being passed down to the ureteric incision and brought out to the lumbar wound. All dead spaces were packed with gauze, and the wound sutured in tiers with No. 2 chromic gut, leaving a space about the middle for exit of the drain ends. Dry dressing.

The patient's postoperative course was normal. There was very little leakage; the wound closed, and the patient left the

hospital in three weeks. Since then he had had no further attacks of pain.

Dr. Willy Meyer said that during the past summer he had to operate on a case of intermittent hydronephrosis where there was a very large sac, and where the ureter was turned on itself so that it came in contact with the sac. The case was treated by doing a plastic operation by the Finney method, and the patient made a perfect recovery.

SYMMETRICAL ADENOLIPOMA OF THE NECK.

Dr. Elsberg, for Dr. Howard Lilienthal, presented a man, 45 years old, with an extensive development of adenolipomata on both sides of the neck and extending down on the chest. The interesting feature of the case was the symmetrical character of the growths. Some of these tumors had been excised and examined, and had been found to contain only fatty tissue. A similar case had been shown at a meeting of the Society some years ago by Dr. Erdmann.

Dr. Elsberg said that at least fifty per cent. of these cases, according to Charcot and Marie, succumbed to pulmonary tuberculosis within five years after the inception of the disease. This patient thus far showed no pulmonary symptoms.

SPLENECTOMY FOR SPLENIC ANÆMIA (RESECTION OF COSTAL ARCH).

Dr. Willy Meyer presented a man, 41 years old, who entered the German Hospital on October 27, 1907, with all the symptoms of a chronic severe disease of the blood. After careful examination the case was regarded as one of pernicious anæmia. At the time of the patient's admission, he was lemon-colored. The heart and lungs were normal. There was marked enlargement of the spleen; the liver was slightly enlarged, and there was some glandular enlargement. An examination of the blood showed 1,260,000 red blood corpuscles, 4800 whites, and 40 per cent. of hæmoglobin. His condition was so poor at this time that the house surgeon, Dr. Ottenberg, made a transfusion from man to man by the method devised by himself, a description of which appeared in the Annals of Surgery (1908, xlvii, 486). The possibility of the case being one of Banti's disease was also considered at this time. Under various methods of treatment, the

blood condition slightly improved. He left the hospital, in February, 1908, but returned again on March 13, 1908, complaining of such intense abdominal cramps in the region of the enlarged spleen that he demanded operative relief, if possible. The direct transfusion had not been of much benefit, inasmuch as he had the same percentage of hæmoglobin and number of whites as formerly, the red blood-corpuscles were 2,072,000. After further study of the case by D. F. Kaufmann, of the German Hospital, it was thought that removal of the spleen might effect a cure. This operation was done on March 23. The spleen was exposed through a median incision; it was much enlarged, and upon introducing the hand into the vault of the diaphragm, a few adhesions were found anteriorly, and a broad band posteriorly, adherent to the diaphragmatic and third dome posterior abdominal wall. A transverse incision at right angles to the first, just above the umbilicus, and meeting the tip of the tenth rib, was added, and in order to gain more room it was lengthened still further toward the tip of the eleventh rib, parallel with the costal arch. The incision downwards was then lengthened, with excision of the umbilicus, and osteoplastic resection of the costal arch done. For the latter purpose the linea alba was incised to the left laterally, and the sheath of the rectus opened. The muscle was then loosened from the posterior sheath and peritoneum, and the arch exposed. The superior epigastric artery and vein, sending many branches to the muscle, required numerous ligations, between which the branches were divided. The seventh, eighth, ninth and tenth costal cartilages were then divided with the knife immediately in front of the ribs, also the union of three at the sternum, and the resection of the costal arch completed without the infliction of any injury to the surrounding structures.

The skin flap was now turned back and the arch raised by an assistant. This gave decidedly more room, and the spleen could now be freely luxated. It measured about 15 x 6 x 4 inches, and there was a firm broad band binding it down to the parietal peritoneum at the diaphragm and the descending colon. These were divided between ligatures under guidance of the eyes. The pedicle of the spleen was firmly adherent to the tail of the pancreas, and because of hemorrhage, a clamp was placed around the latter; it was then firmly compressed and a chromicised cat-

gut ligature put in place, a second clamp having been placed nearer the spleen temporarily. The parts were then divided and the spleen thus removed with a portion of the pancreas. Then the wound closed. The patient made an uneventful recovery from the operation, and since then his general condition had steadily improved. Whereas before the operation the red blood-cells numbered 2,072,000, they now numbered 4,300,000, the white 13,000 and the hæmaglobin has increased from 40 to 90 per cent.

Dr. Meyer said he had resorted to osteoplastic resection of the costal arch in four cases, three of them being operations on the spleen and one on the stomach. It should only be done in those cases where its line of descent interferes with the proper exposure of the parts.

IMPERMEABLE CICATRICIAL STRICTURE OF THE ŒSOPHAGUS; FEEDING THROUGH GASTRIC FISTULA FOR TWELVE YEARS.

Dr. Meyer presented a boy, eighteen years old, who in February, 1896, swallowed, by mistake, a large quantity of caustic lye, resulting in an œsophageal stricture. The case was originally presented by Dr. Meyer before the New York Surgical Society on January 7, 1904, and was subsequently reported in full in *The Medical News*, October 29, 1904. Ten days after swallowing the lye he was admitted to one of the city hospitals, where gastrotomy and division of the stricture by Abbé's string method, at the same sitting, were done one month later. Under suitable after-treatment, the boy was soon able to take food again by way of the mouth. In spite of all that was done, however, the œsophagus showed great tendency to re-contraction. After a few months the stricture had re-formed, and a gastric fistula, according to Witzel's method, had to be established. All attempts at passing the stricture of the œsophagus from above or below were unsuccessful, and the boy had to be fed entirely through the gastric fistula. Seven years later (September, 1903), when the patient was brought to the German Hospital, the entrance into the stricture was so tight that it was impossible to pass even a filiform bougie into the stomach by way of an œsophageal fistula at the neck, which had been made for the purpose. On

December 1, 1903, an osteoplastic gastrotomy was done by Dr. Meyer in order to gain a passage through the œsophagus from below, raising the costal arch, but this also failed.

At the present time, twelve years after the original injury, the boy was still being fed through his gastric fistula, and Dr. Meyer thought it would be futile to make any further attempts to re-establish the patency of the œsophagus, which was evidently the seat of a very extensive cicatricial obliteration. The patient was fairly well nourished. He had gained 26 pounds within the last two years, and now weighed 106 pounds. The method by which he was fed was as follows: He was instructed to partake of a mixed ordinary table diet, and in order to get the benefit of the admixture of the saliva, which was doubtless an important factor in digestion and nutrition, and at the same time to enjoy the taste of his food, he masticated his food thoroughly and then removed it from his mouth into a cup and introduced it into the stomach with the help of a large syringe through the gastric fistula. The boy was a very hearty eater and had at present a tremendously enlarged stomach. Recently, he had been seized by epileptiform attacks, and he had been instructed to wash out his stomach regularly, and take six or eight small meals during the day instead of three large ones, with a resulting improved condition. This was one of the very rare cases that had been successfully nourished through a gastric fistula for many years.

PERICARDIOTOMY FOR TUBERCULOUS EFFUSION.

Dr. Meyer presented a man, 33 years old, who had been an inmate of the German Hospital for some time. His left pleural cavity had been repeatedly tapped and large quantities of a straw-colored fluid had been evacuated. No tubercle bacilli had been found in this fluid. However, the Calmette test was positive. The man's general condition was poor. Examination showed the presence of fluid in the pericardium.

On March 10, 1908, at the request of Dr. Kaufmann, a large needle was introduced by the speaker into the pericardium in the sixth intercostal space, close to the sternum; it was pushed upward and outward, and immediately gave exit to a large quantity of black fluid, about 1250 c.c. being withdrawn. The man was much improved after this operation, but eight days

later he again showed symptoms pointing to a recurrence of the pericardial effusion. On March 17 the needle was again introduced, evacuating about 1000 c.c. of the same black fluid. There was but slight improvement after this second operation, and again the fluid rapidly re-accumulated.

On March 23, 1908, under local anæsthesia, an incision was made from the middle of the sternum over the course of the sixth rib. The cartilage was divided with Gigli's saw near the rib, then elevated and cut through with the scissors at the sternum, and the remains removed with the rongeur forceps. On dividing the tissues parallel with the sternum, the internal mammary artery was exposed and ligated. The pleura was punctured, and a large amount of straw-colored serous fluid escaped. In order to gain more room, an excision of the seventh cartilage was necessary. The rent in the pleura was covered with a pad of gauze, and the pericardium exposed. It was aspirated, giving exit to the same black fluid that had been found at the former paracentesis. The pericardial membrane was then freely incised, evacuating at least three quarts of fluid. The finger was introduced into the large pericardial cavity, but the heart could not be felt. On pushing the finger upward, a mass of coagulated fibrin was felt, which, when cleared away, allowed the heart beats to be felt. The rest of the fluid was then thoroughly evacuated, and by prolonged use of sponges on handles all the fibrin of grayish-black color was removed. A large-sized drainage tube was then introduced, and the pericardium irrigated with warm saline solution. By holding apart the edges of the incision in the pericardium, which was enlarged by a short transverse incision inwards, the cavity of the pericardium could now be beautifully illuminated with the electric light, and the comparatively small pulsating heart was clearly seen, high up, hanging on its vessels. By this time the patient's condition had materially improved. Two long drainage tubes were introduced into the pericardium, and the skin incision was closed with a few silk-worm gut stitches. The patient was put to bed in excellent condition, the upper end of the bed being raised. He made a rather slow, but perfect recovery. His condition at the present time is excellent.

ACCIDENTS IN HERNIA OPERATIONS, WITH ESPECIAL REFERENCE TO THE VESSELS.

DR. JOHN F. ERDMANN read a paper with the above title, for which see page 208.

DR. WILLIAM B. COLEY said that from personal communications, he knew of four instances of injuries to the arteries or veins from needle puncture during the insertion of the deep sutures in Poupart's ligament. The results in these cases were of interest. In one case, the operation was done for strangulated hernia. The iliac vein was badly injured during operation, and the leg had to be amputated. In the second case the vein was opened; it was closed by lateral suture, with uneventful recovery. In the third case the right iliac vein was injured during operation for inguinal hernia in a girl of 18. In this case the needle was introduced from above downwards, and the surgeon stated that it required an extensive dissection in this region before the opening of the vein could be caught with forceps, and a lateral ligature applied. The remaining steps of Bassini's operation were then completed, and a satisfactory recovery followed.

In the fourth case, the patient, 64 years old, had been operated on for strangulated inguinal hernia on one side, and after that operation was completed, a further operation for a large, irreducible hernia on the other side was performed. The notes of the surgeon who did the operation stated that when passing the needle through the under surface of Poupart's ligament, he removed his finger from the tissues about the iliac artery too quickly, caught it with the needle, and when tied, the thread cut through the atheromatous artery. When he removed the stitch, a deluge of blood followed, showing that the external iliac artery had been wounded. It was compressed with the fingers until it could be secured by a clamp, and a ligature above and below was then applied. The patient made a tedious recovery, with slight sloughing of the calf and heel.

Dr. Coley said he believed that this accident could be always avoided if the following precautions were observed: The first and most important of these, he thought, was to see that the needle was always inserted in Poupart's ligament from below upward instead of from above downward (*i. e.*, it should be first introduced into the internal oblique muscle, and then into Pou-

part's ligament, instead of vice versa). (2) The ligament should always be pulled slightly upwards and inwards by thumb forceps during the introduction of the sutures. (3) If the needle be held with the fingers instead of a rigid needle-holder, the danger of injuring the vessels will be still further lessened.

Dr. Coley said he had personally operated upon upwards of 2,200 cases of inguinal and femoral hernia, 1,000 adults and 1,200 children, without ever having met with an accident of any kind. At the Hospital for Ruptured and Crippled, 2,340 operations had been performed by Drs. William T. Bull, John B. Walker and himself, without accident, due largely, he thought, to the observation of the precautions stated.

As regarded injury in bladder hernia, in practically every hernia of the bladder that he had seen there had been present a large amount of properitoneal fat. In the presence of this fatty tissue outside of the sac he was always suspicious of a bladder hernia, and took the usual precautions. Thus far he had never injured the bladder.

Dr. Erdmann said that when he had described his method of inserting the needle as from above downwards, he meant from the proximal to the distal position of the body as it lies on the operating table.

Dr. Walker said that in operating for femoral hernia he had never seen the bladder. He could recall only one case where a vessel was injured during a herniotomy, and in that instance the needle was passed downward through the Poupart's ligament and then upward through the internal oblique. The tip of the needle perforated too deeply through the ligament, tearing into the epigastric artery. Troublesome hemorrhage followed. A clamp was applied to the site of the vessel and removed at the end of forty-eight hours. A normal recovery followed.

Dr. Blake said the expressions, "passing the needle from above downwards" or from "below upwards," were somewhat ambiguous, unless it was understood that they were to be taken in an anatomical sense, and not in relation to the position of the patient.

OPERATION FOR PULMONARY EMBOLISM.

Dr. Willy Meyer described the operation proposed by Prof. Trendelenburg, of Leipsic, before the last German Surgical Congress, for embolism of the pulmonary artery. He ex-

hibited the instruments that were used, and presented to him by Prof. Trendelenburg, to facilitate the operation, which was a delicate one, requiring a resection of the three ribs with their cartilages and the opening of the pleura and pericardium. The operative work naturally involved great skill and dexterity. Dr. Meyer said that one could not but feel great admiration for Trendelenburg, who at an advanced age had the energy and courage to initiate and carry on the experiments for the relief of this condition in animals, and test it afterwards in the human being. Although his patients operated on had not definitely recovered, the feasibility of the operation had been clearly demonstrated. With proper training of nurses and assistants, to promptly recognize the trouble, the hope might be entertained that a number of these otherwise hopelessly lost patients might be saved in the future.

Stated Meeting, November 25, 1908.

The Vice-president, Dr. Ellsworth Eliot, Jr., in the Chair.

GENERAL TUBERCULAR PERITONITIS.

Dr. Irving S. Haynes presented a girl of eight years who was admitted to the Harlem Hospital on January 14, 1908. According to her family history, one maternal aunt and uncle died of tuberculosis. The patient had measles two years ago, and had suffered from bronchitis and cough for several years.

Present History.—About December 15, 1907, the mother noticed that the child's abdomen was beginning to grow larger. This had continued up to the present time. There had been no pain. The urine had been diminished in quantity. She had had fever and night-sweats.

Upon examination, the abdomen was found to be generally enlarged. It was flat on percussion, excepting over an area above the umbilicus, which was tympanitic. This tympanitic area changed with a change of position, and the presence of free fluid in the abdominal cavity was shown by percussion and ascitic waves. The urine was normal. Temperature, 103; pulse, 132.

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An examination of the blood showed 8,500 white cells and 2,240,000 red cells.

The case was diagnosed as one of tubercular peritonitis, and was operated on by Dr. Haynes on January 16, 1908. An intermuscular incision, two inches long, was made over the appendix. Free, blood-tinged fluid was found in the peritoneal cavity. The peritoneum, intestines and omentum were thickened, and of a deep red color. The superficial blood-vessels were prominent, and the surfaces were studded with tubercles. The mesenteric glands were enlarged. The appendix was removed, its stump cauterized and inverted into the cæcum by a purse-string suture. A saline irrigation was then given for its possible curative effect on the tubercular process. The abdomen was closed by layer sutures.

Following the operation, the child's temperature gradually fell from 103 to 99, and the pulse from 130 to 90. The wound healed by primary union, and the patient's health steadily improved. Internally, she was given cod-liver oil and guaiacol carbonate. She left the hospital on February 2, 1908. About a month later the abdominal wound opened throughout its entire extent, discharging a bloody serum, with small cheesy masses. The wound was treated with injections of balsam of Peru, argyrol, and aristol. The child was kept out of doors, with careful attention to her general nutrition, and the guaiacol carbonate was continued for several months. The abdominal sinus gradually closed, and finally healed about October 1. The patient had increased in weight and was apparently in good health at the present time.

Dr. Howard Lilienthal said he had seen quite a number of cases of tuberculous peritonitis in individuals varying in age from very early childhood to late adult life, and most of the cases he had operated on had recovered. He believed that operation unquestionably had a great deal to do with the favorable outcome, in spite of the fact that that question was still under discussion. He had noticed that the most favorable cases for operation were those where the abdomen contained a large amount of fluid, while the dry form was less favorable for surgical intervention, although they may be proper cases for operation on account of the obstructive symptoms.

During the past four years, Dr. Lilienthal said, he had been

using the old tuberculin as a supplement to the surgical treatment, beginning with one forty-thousandth of a milligram, and not running the dose high enough to cause a reaction. He was convinced that this was of real value, and that it should be used more frequently. In the case shown by Dr. Haynes there was a decided irregularity of the abdominal outline in one area, suggestive of the presence of adhesions and a probable recurrence of intestinal obstruction in the near future.

Dr. Alexander B. Johnson said that his experience, in common with that of others, was that those cases of tubercular peritonitis associated with a considerable accumulation of serum in the abdomen were the only ones that were usually notably benefited by surgical intervention, and even those had not always done well. In that group of cases attended by localized accumulations of broken down tubercular material and infiltration of the intestinal coils with tubercles, the results had not, in his hands, been satisfactory. In those cases where the process was a dry one, and one found simply an obliteration of the peritoneal cavity, his results had not been very favorable. While those patients had not been injured by operation, they had not been benefited.

Dr. Johnson said that about ten days ago an elderly woman was brought to the hospital with symptoms of obstipation. The bowels had been extremely difficult to move, and upon examination he found what he considered to be a number of distended coils of large intestine. After repeated enemata he could still feel a large sausage-shaped tumor along the course of the descending colon. Upon opening the abdomen in the left iliac region he found a tubercular peritonitis, with complete obliteration of the peritoneal cavity. The tumor that had been felt proved to be a mass of tubercular omentum.

Dr. John Rogers called attention to the fact that a fecal fistula occasionally followed operative interference with these cases, particularly those of the adhesive type. If that accident occurred, there was no escape from a fatal outcome.

Dr. John B. Walker mentioned the case of a girl of sixteen years who was operated on for a tubercular peritonitis which apparently originated in the appendix. A fecal fistula followed, and the case resulted fatally in about six months.

Dr. Lilienthal thought the statement made by Dr. Rogers was rather too sweeping, unless he limited it to true fecal fistula

(of the small intestine). Personally, he could recall two cases of fecal fistula of the colon following operation for tubercuIous peritonitis, and in both instances the patients recovered.

Dr. Rogers mentioned two cases in which a fecal fistula resulted, in spite of the great care that was taken not to tear or manipulate the gut. The abdomen was simply opened and flushed out.

Dr. Johnson said that about two months ago an Italian girl, about 16 years old, was brought to the hospital complaining of swelling of the abdomen, pain, tenderness and fever. There was marked increase in the leucocyte count, with a relatively high increase of the polymorphonuclears. No positive diagnosis was made prior to operation. Upon opening the abdomen he found an ovarian cyst of considerable size, containing perhaps a quart of fluid, which proved to be tubercuIous. There was also a very large abscess outside of the ovarian cyst, the contents of which had a very strong fecal odor. The coils of small intestine, as far up as the umbilicus, were the seat of a peritonitis. In separating the various adhesions and emptying the cyst, he came upon a large lumbricoid worm, but it was impossible to locate the perforation in the small intestine from which the worm had escaped. After the operation practically all the contents of the small intestine escaped through the wound, but by careful attention to the after-treatment, regulating the diet, keeping the wound packed and strapped, the patient finally recovered. The tract leading to the fistulous opening was deep and this he believed rendered the chances of spontaneous closure better.

Dr. Arthur L. Fisk said that about fifteen years ago he was asked to operate upon a young man of 25 years, who had typical signs of appendicitis, with a mass in the right iliac fossa. The usual incision was made over the site of the appendix, and when the peritoneum was opened, the caput coli was seen thickly studded with tubercles, and the wall of the bowel was greatly infiltrated. The abdominal incision was closed without any drain; no operation was performed on the bowel. Within three weeks after, a fecal fistula developed in the site of the abdominal incision; the patient died within two months thereafter.

Dr. Fisk recalled four other cases of tubercular peritonitis, which he had operated upon; in three of these the peritoneum was covered with tubercles and there was fluid within the peritoneal

cavity, these cases were all benefited by the operation; but the fourth case was of the dry adhesive variety, and this case was neither helped nor injured by the operation.

Dr. WALKER mentioned the case of a woman, about thirty, upon whom he operated for tubercular peritonitis, evacuating a large amount of fluid. Five years later the patient was again operated, this time for appendicitis, and at this operation no adhesions were found, and no evidences of the former peritonitis.

Dr. JOHN A. HARTWELL said that in discussing this subject, we should bear in mind the different forms of tubercular peritonitis. In the case shown by Dr. Haynes, the inflammatory process was apparently limited almost entirely to the peritoneum, without any involvement of the other intra-abdominal structures except the possibly primary focus in the appendix. The cases where the intestines were intensely matted together belonged to another class, and their treatment was entirely different. Under those conditions, a simple laparotomy was very apt to produce a fecal fistula, whether the intestines were handled or not. The speaker said he had seen several such cases at the Lincoln Hospital in colored patients, and in spite of every precaution a fecal fistula developed in three or four of them, with fatal results. Those could not be properly classified as simple tubercular peritonitis.

Dr. Hartwell said that in a case seen at Bellevue Hospital, the patient, in addition to the tubercular peritonitis, had tuberculosis of the ascending colon, which was occluded to such an extent by the inflammatory process that it barely permitted the passage of a probe. Such cases he did not think could be benefited by operation, unless it were possible to remove such foci, which, in those cases with extensive intestinal involvement, it is impossible to do.

Dr. FISK said that the distinction between these different forms, which Dr. Hartwell made, was not the usual one. These varieties are progressive stages of the same disease—tubercular peritonitis. The early stage is characterized by the formation of tubercles over the peritoneum and fluid within the cavity; a later stage by great thickening of the walls of the bowels, adhesion (cohesion better) between the peritoneal surfaces of the different coils of the intestines, even to obliteration of the peritoneal cavity; and, possibly, finally the formation of abscesses.

Dr. ELLSWORTH ELIOT, JR., said that he had seen two cases of

tubercular peritonitis with the subsequent formation of fecal fistula, one of the large and one of the small intestine. The first patient was a girl of twelve years upon whom laparotomy was done for a simple serous tubercular peritonitis. The fluid was removed without damage to the intestines and the wound closed without drainage. The patient left the hospital healed but several weeks later developed an intestinal fistula which discharged for months. Eventually, the fistula closed spontaneously, the child gained in strength and flesh and five years after the operation was still in perfect health without sign of relapse.

The other case was one of advanced tubercular peritonitis of pelvic origin with evidences of beginning cheesy degeneration. Laparotomy and drainage of an extensive pyosalpinx was resorted to. The bladder and rectum subsequently became involved in the tuberculous process and about two months later, the laparotomy wound being still open, the patient developed a spontaneous fistula of both of those organs communicating with each other and with the drainage sinus. The patient succumbed about six weeks later to general miliary tuberculosis. In a third case of tubercular peritonitis of the connective-tissue type in a man 22 years of age, laparotomy was done, but accomplished nothing save the separation of adhesions. Subsequently, his abdominal wound healed, his constitutional symptoms disappeared, and he remained in perfect health and able to work for six months. He then developed a tubercular meningitis which proved fatal.

Dr. Johnson said he wished to record another case of tubercular peritonitis involving the cæcum and ascending colon in which he operated with the idea that he had to deal with an appendicitis. Upon opening the abdomen, he found the cæcum converted into a thick-walled tube, infiltrated with tubercle. The patient was a girl of fourteen years who had been operated on for tubercular glands of the neck by Dr. Johnson, and after the wound in the neck healed she developed symptoms referable to the abdomen. Subsequent to the abdominal operation she developed a fecal fistula, for which she was afterwards operated on at the City Hospital by Dr. H. D. Collins, who resected the cæcum and a portion of the ascending colon and then made an anastomosis. After this the girl remained well for many months, and finally died of tubercular meningitis.

INTESTINAL OBSTRUCTION DUE TO TUBAL PREGNANCY.

Dr. Walton Martin presented a woman, 24 years old, who entered St. Luke's Hospital on July 17, 1908. Three days before admission she had been seized with severe, cramp-like abdominal pain, which persisted and was so severe that on the following day she fainted. She gradually grew weaker, and when admitted to the hospital she was in a state of collapse. Since the onset of her attack there had been no movement of the bowel, and vomiting had been incessant. During the past twenty-four hours the abdomen had become distended.

Previous to this illness, the patient had enjoyed good health. Menstruation had always been regular until three months ago. Since that time there had been no regular menstruation, but she had noticed on several occasions and at irregular intervals slight bleeding from the vagina.

On examination, she was seen to be in shock, very pale, with the skin cold and clammy. The pulse was weak and rapid. The abdomen was distended and very tense; the lower abdomen was tender. On vaginal examination the cervix was soft, and the os admitted the tip of the finger. There was a feeling of fulness in the posterior fornix. The patient's temperature was 102; pulse, 140; respirations, 24. The leucocyte count was 11,300; the differential count showed 91 per cent. polynuclear cells; the hæmoglobin was 35 per cent.

The patient was immediately prepared for operation. Under ether anæsthesia the abdomen was opened in the median line, and a large quantity of dark-colored blood escaped as soon as the peritoneum was incised. The left tube was apparently normal in size and appearance at its uterine attachment, but near the ampulla a mass the size of an egg could be felt lying above the brim of the pelvis, and fixed. A loop of small intestine below this mass was flattened, while the coils above were distended. On freeing the mass and bringing it out through the wound, it was seen to be made up of the ampulla of the tube, the ovary and a bag of membrane containing a fœtus. This hung from the end of the tube and had evidently compressed the loop of bowel, for on removal of the mass, gas passed into the flattened intestine. The wall of the intestine showed no evidence of interference with circulation. The tube, ovary and fœtus were removed, and the abdomen closed. At the completion of the operation the patient

was in very bad condition, the pulse being 150 and very feeble. A saline intravenous infusion was given. On the following day there was a gradual improvement. Flatus was passed, and on the second day the bowels moved. From that time on her convalescence was uninterrupted, and she left the hospital on August 9, twenty-one days after the operation.

The uncommon cause of the ileus in this case, Dr. Martin said, seemed to him of sufficient interest to record.

THE PREVENTION OF INTESTINAL OBSTRUCTION FOLLOWING OPERATION FOR APPENDICITIS.

Dr. Forbes Hawkes read a paper with the above title, for which see page 192.

Dr. Charles L. Gibson called attention to the fact that in some instances some antecedent condition of the patient was entirely responsible for any postoperative complication rather than the operation itself. Many of these patients gave a long-standing history of repeated attacks of appendicitis, and the post-operative obstruction might be the result of adhesions and fixation of the intestine at a point remote from the site of the operation.

Another point to which Dr. Gibson referred was that since we had learned to do away with multiple incisions and the insertion of a large amount of gauze drainage, we were less apt to get adhesions than formerly, but in spite of this fact a certain number of the cases did badly. Where a large raw surface was left and free drainage was indicated, he preferred to use a Mikuliez tampon made of heavy rubber dam, such as dentists employed. It should be suitably provided with openings and inserted into the depth of the wound and plugged with gauze. It could be left there almost indefinitely (ten days or more), the gauze only being changed, and did not cause any irritation of the intestines. He looked upon this as the most efficient method where free drainage was indicated.

Dr. Haynes said that about twelve years ago he had a peculiar postoperative experience. After an operation for the removal of pus tubes there was postoperative intestinal obstruction and the abdomen was opened a second time. The small intestines, the cæcum, and ascending colon, were distended with

gas, but the rest of the large intestine was collapsed. On drawing the ascending colon downward a kink at the hepatic flexure was straightened out, the intestinal contents began to pass through the collapsed intestine and the bowels operated through the natural passage while the patient was on the table. The obstruction seemed to be due to an exaggeration of the hepatic flexure, and after the gas once began to accumulate in the ascending colon and distend this portion of the intestine the obstruction became complete. There were no evidences of any inflammatory action at the site of the obstruction. The patient did not recover from the shock of the second operation.

In speaking of drainage, Dr. Haynes said he thought the most efficient method was to employ either a medium-sized tube, or two small ones. The flow was due not so much to capillary action as to the *vis a tergo* from the intra-abdominal pressure. All we had to do was to provide a proper vent, and the intra-abdominal pressure would do the rest. In some cases it was necessary, for the purpose of drainage, to insert a strip of gauze to the site of the pelvic wound or intestinal anastomosis or gall-bladder stump; this was left for five, seven or perhaps ten days, and its removal was then usually attended with considerable difficulty. He recalled a case where a man was shot through the stomach, and stomach contents had escaped into the great omental bursa which consequently was drained by a gauze wick. On attempting to remove this drain after about two weeks the adhesions were so firm that it was thought dangerous to persist in the usual way by twisting and loosening different parts of the gauze and the following device was utilized, which has proven to be a time- and pain-saving measure. It consisted in threading a small uterine curette over the gauze; by a rotary motion the adhesions were easily severed. After appendix operations, the speaker thought it was better to invert the stump after excision and ligation. Dr. McWilliams had shown that intestinal obstruction might follow in cases where the appendix was simply ligated and the stump removed, and the speaker thought it was better to invert the stump.

Dr. L. W. Hotchkiss said that about seven years ago he read a paper before this Society upon the subject of intestinal obstruction following acute appendicitis. In that paper he had reported three cases of his own, and some twenty cases that had

been recorded by other members. The result of that investigation confirmed the observation just made by Dr. Gibson, that in a certain number of these cases, the obstruction was due to adhesions resulting probably from the character of the infection and from other factors over which we had no control. The speaker recalled one reported case where the loop of intestine which was the seat of the obstruction had been found on the opposite side of the abdomen.

Dr. Hotchkiss said the more common use of the cigarette drain and the less frequent use of gauze packing no doubt had much to do with the diminution in the number of cases of obstruction following abdominal operations. Personally, he believed in using comparatively little drainage in appendicitis operations unless it was necessary in the presence of local necrosis or for the purpose of removing extensive exudations, and then he thought it should only be used as a temporary measure and removed as soon as possible. In inflammatory conditions about the appendix, we had often to deal with essentially a protective process, which resulted in the formation of more or less fibrinous adhesions between the adjacent coils of intestine, in the effort to wall in the infectious foci. These adhesions rendered all efforts at effective drainage futile and under these conditions, gravitation did not of course lead to the pooling of the secretions in some one dependent part of the abdomen from which they could easily be drained. As to the reintroduction of gauze drainage, the speaker said he did not feel convinced that it was a preventive of secondary abscesses in itself. Most surgeons were getting away from prolonged drainage with results that were certainly better than before. He was in favor of removing the drain at the earliest possible moment, and allowing the wound to heal. The tube or flask drain was useful in some cases, but its own presence if prolonged doubtless led to an increase in the secretions and the production of troublesome sinuses.

Dr. Hawkes, in closing, said he was fully in accord with what had been said in regard to the possibility of intestinal obstruction occurring after appendicitis in spite of the most careful attention to technic. Still, there were cases in which the accident was distinctly traceable to faulty technic.

In regard to drainage, the speaker thought we could fairly conclude that we did not get actual peritoneal drainage from any

point remote from our drainage tract for more than eighteen hours after operation. Then we simply got serum from around the drain. In reply to Dr. Haynes, the speaker said he had never attached the omentum to the stump; he had simply pulled down a free piece of omentum over the stump, so that the upper part of the omentum rested on the caput coli. Personally, he had never had a case of intestinal obstruction result from that method of treating the omentum, nor had he ever inverted the stump of the appendix. He simply tied it off quite short, touched it with a little carbolic acid, and covered it with omentum when possible. A number of times he had had the opportunity to see the results of this method subsequently, and he was scarcely able to find any trace of where the stump had been.